TABLE II

Ammonolysis of Sodium Isethionate in the Presence of Sodium Tritaurinate

Ex	Tritaurinate/ Isethionate (ratio by weight)	NaOH/ Isethionate (ratio by weight)	Taurinate (molar yield %)	Di + Tritaurinate (molar yield %)
11	0	0.01	76	24
12	0.1	0.01	83	16
13	0.2	0.01	86	14
14	0.3	0.01	87	13
15	0.3	0.02	88	11
16	0.3	0.03	94	6
17	0.3	0.04	94	5
18	0.3	0.05	98	2
19	0.5	0.15	121	−20
20	1.0	0.20	151	−49

Example 3

This set of examples relates to the ammonolysis of sodium isethionate in the presence of a mixture of sodium ditaurinate and sodium tritaurinate obtained from the mother liquor of taurine crystallization and in the presence of sodium hydroxide and sodium sulfate.

All examples are for 0.05 mole of sodium isethionate, dissolved in 35 mL of 20% aqueous ammonia solution in a molar ratio of 1:8 for sodium isethionate to ammonia. Calculated amount sodium hydroxide is then added to the solution. A mixture of sodium ditaurinate and sodium tritaurinate, obtained from the crystallization mother liquor described as in application Ser. No. 14/120,046 is used. The ammonolysis reaction is carried out in an 100 mL autoclave at 220° C. under autogenous pressure for two hours. The content of taurine, ditaurine, and tritaurine is assayed by HPLC analysis. The yields are calculated according to the following formula:

$$\text{Taurinate Yield (\%)} = [\text{Taurine}]/[\text{Sodium Isethionate}]$$

$$\text{Di+Tritaurinate Yield (\%)} = [\text{Di+Tritaurine} - (\text{Added Di+Tritaurine})]/[\text{Sodium Isethionate}]$$

TABLE III

Ammonolysis of Sodium Isethionate in the Presence of a Mixture of Sodium Ditaurinate and Sodium Tritaurinate

Ex	(Di + Tritaurinate)/ Isethionate (ratio by weight)	NaOH/ Isethionate (ratio by weight)	Taurinate (molar yield %)	Di + Tritaurinate (molar yield %)
21	0	0.01	81	19
22	0.1	0.01	84	16
23	0.2	0.01	87	12
24	0.3	0.01	87	13
25	0.3	0.02	88	11
26	0.3	0.03	95	4
27	0.3	0.04	96	4
28	0.3	0.05	98	2
29	0.5	0.15	126	−26
30	1.0	0.20	154	−53

Example 4

This set of examples shows the effect of a different catalyst on the ammonolysis of sodium isethionate in the presence of a mixture of sodium ditaurinate and sodium tritaurinate obtained from the mother liquor of taurine crystallization.

All examples are for 0.05 mole of sodium isethionate, dissolved in 35 mL of 20% aqueous ammonia solution in a molar ratio of 1:8 for sodium isethionate to ammonia. Calculated amount catalyst and a mixture of sodium ditaurinate and sodium tritaurinate, obtained from the crystallization mother liquor described as in application Ser. No. 14/120,046, are added to the solution. The ratio of (di+tritaurinate)/isethionate by weight is fixed at 0.3. The ammonolysis reaction is carried out in an 100 mL autoclave at 220° C. under autogenous pressure for two hours. The content of taurine, ditaurine, and tritaurine is assayed by HPLC analysis. The yields are calculated according to the following formula:

$$\text{Taurinate Yield (\%)} = [\text{Taurine}]/[\text{Sodium Isethionate}]$$

$$\text{Di+Tritaurinate Yield (\%)} = [\text{Di+Tritaurine} - (\text{Added Di+Tritaurine})]/[\text{Sodium Isethionate}]$$

TABLE IV

Effect of Catalyst on Ammonolysis of Sodium Isethionate in the Presence of a Mixture of Sodium Ditaurinate and Sodium Tritaurinate

Ex	Catalyst	Catalyst/ Isethionate (ratio by weight)	Taurinate (molar yield %)	Di + Tritaurinate (molar yield %)
31	None	0	55	12
32	Sodium carbonate	0.15	96	4
33	Sodium sulfite	0.15	95	4
34	Potassium hydroxide	0.10	97	3
35	Potassium carbonate	0.15	94	6
36	Potassium sulfite	0.10	94	6
37	Lithium hydroxide	0.03	95	4
38	Lithium carbonate	0.10	93	7
39	Sodium phosphate	0.15	97	3
40	Potassium phosphate	0.15	96	4
41	Potassium acetate	0.20	96	4
42	Sodium acetate	0.20	96	4

It will be understood that the foregoing examples and explanation are for illustrative purposes only and that various modifications of the present invention will be self-evident to those skilled in the art. Such modifications are to be included within the spirit and purview of this application and the scope of the appended claims.

What is claimed is:

1. A process for producing taurine from alkali isethionate, comprising:

(a) mixing alkali isethionate with a solution of alkali ditaurinate, alkali tritaurinate, or their mixture in the presence of one or more catalysts;

(b) adding an excess of ammonia to the (a) and subjecting the solution to ammonolysis reaction to yield a mixture of alkali taurinate, alkali ditaurinate, and alkali tritaurinate;

(c) removing excess ammonia and neutralizing with an acid to obtain a crystalline suspension of taurine; and

(d) separating taurine by means of solid-liquid separation.

2. The process according to claim **1**, wherein alkali taurinate and alkali tritaurinate are produced from diethanolamine and triethanolamine, respectively.

3. The process according to claim **1**, wherein a mixture of alkali ditaurinate and alkali tritaurinate is the byproduct of the ammonolysis reaction of alkali isethionate.